



R-WALL®

Insulating Concrete Formwork



ECO-CONSCIOUS CONSTRUCTION

- Environmentally sensitive materials for a sustainable future



SUPERIOR PERFORMANCE

- Advanced closed-cell insulation with zero cold bridging ensures exceptional thermal efficiency and ultra-low running costs



STRENGTH & SPEED

- Increased construction strength, simplified non-modular build system, reduces costs and accelerates construction



FREEDOM BY DESIGN

- New non-modular design removing typical restrictions of modular ICF systems

BUILD SMARTER. LIVE GREENER.

AWARD-WINNING UK ICF BUILD SYSTEM



FOR MORE INFORMATION OR
A NO OBLIGATION QUOTATION



info@r-wall.co.uk



01288 377337



www.r-wall.co.uk



CLIENT REVIEW:

"The ability to build at any time of year without concerns over water damage or material degradation is particularly valuable. Simplifying airtightness, eliminating cold bridges at critical junctions, and providing closed cell waterproof insulation are all key attributes of the system."

ARCO2 Architecture

R-WALL is a UK-designed modern Insulating Concrete Formwork system, created near Bude on the Devon / Cornwall border.

A BETTER WAY TO BUILD

WHY R-WALL WAS CREATED

The UK construction industry is under increasing pressure to improve productivity, sustainability and building performance in response to the housing crisis. Yet many traditional practices have changed very little in hundreds of years. Government policy has called for homes to be delivered faster, with less reliance on skilled labour, while achieving higher performance and healthier living standards. R-WALL was created directly in response to this need.

HOW DID WE FIND THE SOLUTION?

We compared the main forms of construction, their advantages, disadvantages and future viability to understand what a genuinely future-ready walling system needed to do better.

TRADITIONAL MASONRY

ROBUST & FAMILIAR

- Slow to build and weather-dependent.
- Heavy reliance on skilled labour.
- Thicker cavities make future energy standards and opening details increasingly complex.

TIMBER FRAME

FASTER, BUT WITH TRADE-OFFS

- Quicker, but still weather-sensitive and skill-dependent.
- Moisture, rot and long-term durability can be concerns.
- Sound attenuation and thermal bridging can make higher performance more difficult.

CONVENTIONAL ICF

STRONG PERFORMANCE

- Excellent energy efficiency and sound attenuation.
- But many systems rely on a modular 'block' format.
- That can restrict design flexibility, detailing and construction sequencing.

THE CONCLUSION

Keep the performance advantages of ICF, but remove the buildability limitations. That thinking led to R-WALL — a flexible, non-modular system designed around real construction.

BUILT FROM COMPLEMENTARY EXPERIENCE

LISA TREWIN BSc (Hons) Environmental Scientist

MATTHEW TREWIN Builder by trade

Both Cornish, they combine environmental science with practical building experience to develop a system focused on speed, flexibility, energy performance and long-term durability.

PROVEN IN THE MARKET

R-WALL has since won industry awards and is quickly being adopted by self-builders and developers. It is very rare for customers who have built with R-WALL to return to conventional building methods. The industry needs to change — and R-WALL has the answers.

CONSTRUCTING EXCELLENCE — JUDGES' COMMENTS

"The judges were impressed on all counts by the winner of this category. Innovation can be difficult in challenging markets, but the winner brought experience and conviction to deliver a compelling solution to some of the challenges facing construction today. With a skills shortage combined with a requirement for thermal efficiency along with minimising adverse environmental impacts, the winner has proved that construction can meet these challenges."



INDUSTRY RECOGNITION

Constructing Excellence South West Awards 2026



AWARD-WINNING PERFORMANCE

Build It Awards 2025 — Best Insulation Product

UK BASED. FAMILY RUN. BUILT AROUND SUPPORT.

Released in 2020, R-WALL has grown rapidly through the building profession, with training, customer service and practical support at the heart of the company.

WHAT IS INSULATING CONCRETE FORMWORK (ICF)?

ICF is a construction method in which layers of insulation are connected to create permanent shuttering, or formwork, that remains in situ. Concrete is then poured into the formwork to create the main structure of the home. The performance of an ICF home exceeds that of many standard construction methods.

WHAT IS R-WALL & HOW IS IT DIFFERENT?

R-WALL is an innovative ICF system developed for homeowners, architects and developers, offering a cutting-edge build method without compromise. Unlike other ICF systems, R-WALL uses higher-grade closed-cell structural insulation known as XPS (extruded polystyrene). Its non-modular design increases build speed and versatility while reducing complexity. XPS creates stronger formwork, resulting in homes that deliver higher performance and exceptional longevity.



STRONGER, HIGHER-PERFORMING FORMWORK

Use of closed-cell (water-impermeable) insulation.



NON-MODULAR = LESS COMPLEXITY

Reduces design and build complexity, creates less waste and a lower carbon footprint.



UK DESIGNED, BUILT FOR UK STANDARDS

Horizontal fixing points every 298 mm vertically, ensuring compatibility with UK metric building materials.



UNCONGESTED CORE

Easier pouring and better concrete fill efficiencies.

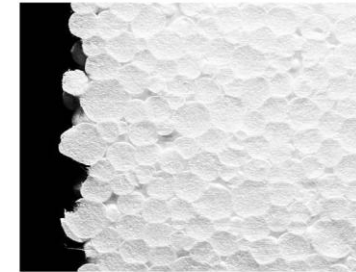
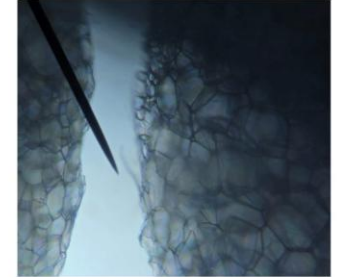


MOVABLE R-TIE SYSTEM & ADJUSTABLE INSULATION

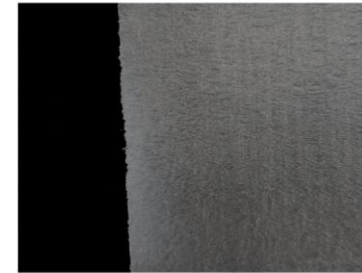
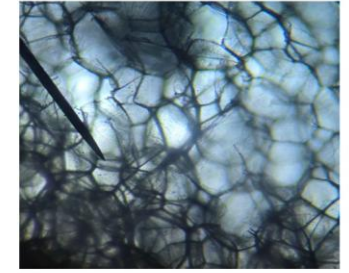
Allows insulation thicknesses to be altered in any location and easily accommodates I-beams and starter bars, while creating the appearance of flush cladding.



Conventional ICF – EPS – open cell



R-WALL ICF – XPS – closed cell



U-VALUES
AS LOW AS
0.09 W/m²K



FIRE RATING
UP TO
4 HOURS



EXCEPTIONAL
SOUND
INSULATION



LIFESPANS IN
EXCESS OF
60 YEARS



HEALTHIER,
LOW-COST
LIVING



FULLY BBA TESTED AND APPROVED

Accepted by building control, warranty providers and mortgage lenders.



**UK DESIGNED.
UK MANUFACTURED.**

Cornish-based family business
founded in 2020.

The entire system is UK manufactured and designed to meet and exceed current Building Regulations. R-WALL is designed to revolutionise UK construction, building homes more quickly with less aftercare and with significantly reduced running costs. These homes deliver exceptional longevity, outstanding performance and more comfortable, healthier living spaces. R-WALL builds have won multi awards and boasts the first home in the UK to be awarded the AECB CarbonLite plaque.

R-WALL is quick and simple build method which enhances the speed of construction whilst reducing the complexity.



- 1 Lay R-WALL starter course**— onto standard footings, slab, block and beam or combine with the R-WALL under slab system. R-Ties move to accommodate starter bars if required.



- 2 Build formwork** - R-Boards are 2.5m long and weigh less than 2 bags of sugar! Laying one section of R-WALL which can be completed in a matter of minutes is equivalent to laying 14 concrete blocks in one go! Lintels are formed monolithically within the system with re-bar placed in the formwork over openings (structural engineer specified)



- 3 Add alignment brace system & form window bucks** - hired from R-WALL and placed on one side of the formwork to ensure plumb walls!



- 4 Pour concrete into formwork** – using standard concrete mixes, placed via a concrete pump or line pump. Often to intermediate floor wall heights per pour. Once complete this is your finished superstructure and ready for the next stages.



- 5 Fit windows & Roof** – R-WALL is compatible with any roof type, and due to the strength of the insulation, windows can be placed at any depth in the opening, fitted with conventional methods.



- 6 Apply internal & external Finishings**— applied quickly and easily via battens fixed into the R-Rails within the R-WALL system, renders adhere directly to the R-WALL. Plasterboard screws into the R-Rails and electrics chase straight into the insulation – quick & simple!

With the same four components, R-WALL can build anything! This means that complex projects with curves and angles can become a reality; the non-modular system offers more freedom in design and construction. R-WALL must be installed by a trained installer. A list of trained installers can be provided on request. Alternatively, builders or self-builders can complete the **R-WALL training programme** to achieve Trained Installer status. We offer both optional on-site training and access to an online video-based training library, as well as a written instruction manual and unlimited telephone support.



RESIDENTIAL HOUSING
detached, terraced, flats (up to 11m in height)



SWIMMING POOLS & SWIM PONDS



COMMERCIAL BUILDINGS
including schools



BASEMENTS & RETAINING WALLS



EXTENSIONS & PERIOD FEATURES



CANTILEVERS



ANY DEGREE OF CURVE & ANY ANGLE OF CORNER



ANY SIZE AND LOCATION OF OPENING



CONCRETE CORE VARIATIONS -
vertically or horizontally, e.g. retaining to non-retaining



CREATE FLUSH-APPEARANCE CLADDING
by altering R-Board thicknesses



ACCOMMODATE ANY LOCATION OF STARTER BARS
with movable R-Ties



INCORPORATE I-BEAMS
overcoming thermal bridging



COMPATIBLE WITH ANY ROOF TYPE



COMPATIBLE WITH ANY INTERMEDIATE FLOOR TYPE



CREATE INSULATED OR CONCRETE-FACED WALLS, OR
a combination of the two!



UK BASED

Ensuring high standards,
improved logistics &
supply timescales



QUICK BUILD, REDUCED DELAYS—NO HEAVY LIFTING OR SPECIALIST TOOLS

R-WALL can be built in all weather conditions, reducing construction delays. Follow-on trades can also complete their work more quickly, with electrical services easily chased into the insulation and plasterboard fixed directly to the system. Say goodbye to dot and dab—and hello to your new home!



ENERGY-EFFICIENT HOMES WITH LOWER RUNNING COSTS

A recent study showed that an R-WALL home had annual living costs of minus £25. The system eliminates cold bridging, providing healthier living standards. R-WALL's closed-cell, double-layered insulation and solid concrete core create highly energy-efficient homes that are naturally airtight. The homes do not warp or suffer post-construction movement; therefore, airtightness is maintained. R-WALL eliminates cold bridging, helping to prevent mould and mildew formation.



ADVANTAGES OF THERMAL MASS—INCREASED ENERGY EFFICIENCY

Thermal mass is the ability of a building material to absorb, retain and store heat energy. The walls buffer external temperature changes, improving energy efficiency, reducing costs and enhancing overall comfort. This advantage is not currently measured in energy-efficiency calculations. A recent study found that ICF homes typically require 32% less energy for cooling and 44% less energy for heating than timber-frame homes built to the same energy-efficiency standards.



GREATER SOUNDPROOFING—TRANQUILLITY IN YOUR HOME!

Adequate soundproofing is essential for a truly comfortable living environment. A recent study found that less than one-third as much sound passes through an ICF wall as through a timber-frame wall, with STC ratings in excess of 50.



INCREASED FIRE RESISTANCE—FEEL SAFER IN YOUR HOME!

R-WALL achieves the highest possible fire rating of four hours, in accordance with the BBA. The concrete core maintains its integrity during a fire, acting as a firebreak that resists the spread of fire and provides safer access for emergency services.



UK-BASED, ENSURING HIGH STANDARDS, IMPROVED LOGISTICS & SUPPLY TIMESCALES



HIGH-LEVEL STORM RESISTANCE

ICF construction can withstand wind speeds of over 200 mph and projectile debris travelling at more than 100 mph, providing reassurance that your home is built to withstand extreme weather.



DURABLE AND LOW MAINTENANCE

A home's superstructure is its main structural frame and one of its most important investments. Failure of this structure could result in the total loss of the property, making longevity and material resistance essential. A poured ICF home is seven times stronger than traditional block construction. Concrete continues to strengthen over time, while R-WALL's closed-cell insulation does not rot and is unaffected by water. R-WALL has BBA-certified durability of more than 60 years, compared with around 25 years for timber frames—almost three times the expected lifespan. Greater longevity also reduces the whole-build carbon footprint. Unlike many other construction methods, ICF requires very little maintenance throughout the life of the home.



BUILT SUSTAINABLY—LOW-CARBON, CLIMATE-CONSCIOUS CONSTRUCTION

Long service life, high energy efficiency and UK-based manufacturing all help reduce a home's carbon footprint. R-WALL is made from 93% recycled plastics and manufactured using cow power (anaerobic digestion); its individual components are fully recyclable. Offcuts are reused in the formwork, supporting zero waste to landfill, while flat-pack transportation improves delivery efficiency. The insulation is blown using recovered industrial CO₂, and the manufacturing facility uses electricity generated from wind power. This contributes to a BREEAM A+ rating and an Ozone Depletion Potential of zero. An R-WALL home was the first in the UK to receive the AECB CarbonLite plaque and currently costs minus £25 per year to run, including charging two cars.



RESISTANCE TO PESTS—KEEP UNWANTED INTRUDERS OUT!

Solid concrete walls and non-organic materials help prevent infestations by rodents and woodworm, avoiding costly repairs and damage to structural integrity. With R-WALL, unwanted pests stay out.



SUSTAINABLE

93% recycled plastics
100% recyclable
Zero waste to landfill

R-WALL can achieve U-Values as low as **0.09W/m2K**. The table to the right displays the full range of available R-WALL options, their achievable U-Values and associated wall thickness prior to finishings. To select your R-WALL system you can choose from the following;

1 CHOOSE THE R-TIE TO VARY THE CONCRETE CORE THICKNESS

The options are as follows with core use guides (please note cores would be structural engineer specified);

1. **105 mm (4 inch)** – Internal Walls
2. **159 mm (6 inch)** – Standard walls
3. **212 mm (8 inch)** – Retaining up to 3m
4. **262 mm (10 inch)** – Retaining 3m- 6m
5. **313 mm (12 inch)** – Retaining 6m plus

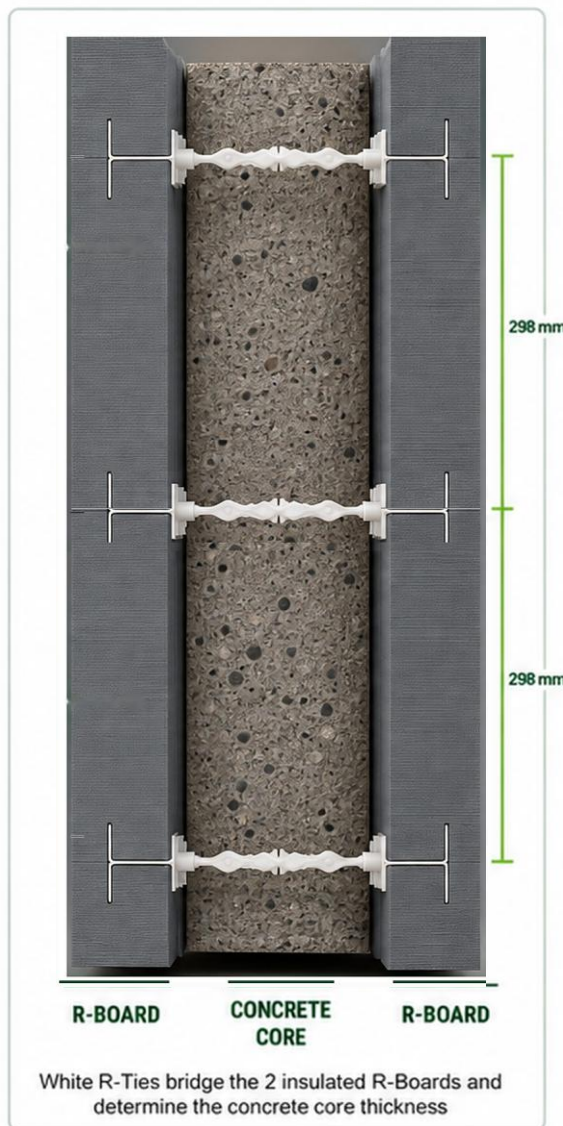
2 CHOOSE THE R-BOARD THICKNESS

Internally and externally to decrease the U-Value and increase the energy efficiency

The options available are:

1. **Eco – 50mm**
2. **Standard – 75mm**
3. **Supreme – 100mm**
4. **Superior – 125mm**
5. **Ultimate – 150mm**

The R-Board thickness can be varied internally and externally anywhere in build making better use of thermal mass or perhaps for aesthetics eg accommodating varying thickness of wall claddings to achieve a flush finish.



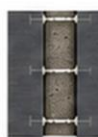
R-WALL SYSTEM OPTIONS

R-WALL System	R-Board External Wall Insulation (mm)	R-Board Internal Wall Insulation (mm)	Achievable U-Value W/m2K	Wall Width mm (with 159mm core)
Ultimate	150	150	0.09	459
Superior +	150	125	0.10	434
Superior	125	125	0.11	409
Supreme 150	150	100	0.11	409
Supreme +	125	100	0.12	384
Supreme	100	100	0.14	359
Standard 150	150	75	0.12	384
Standard 125	125	75	0.14	359
Standard +	100	75	0.16	334
Standard	75	75	0.18	309
Eco 150	150	50	0.14	359
Eco 125	125	50	0.16	334
Eco 100	100	50	0.18	309
Eco +	75	50	0.21	284
Eco	50	50	0.25	259

LOW U-VALUES | FLEXIBLE CORE DEPTH | VARIABLE INSULATION | UK METRIC COMPATIBLE

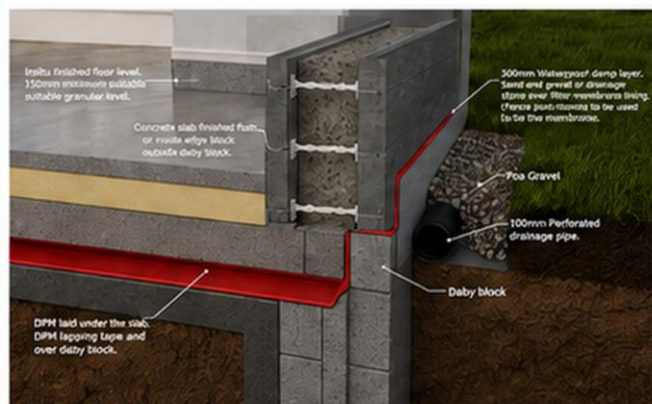
Use this page as a visual representation to the system options table. Each drawing shows the relative internal/external R-Board build-up for the R-WALL range. The thicker of the insulations are generally placed on the external wall to make better use of thermal mass.

AVAILABLE R-WALL BUILD-UPS

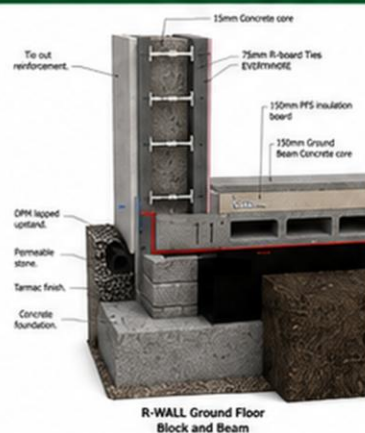
	External 50mm	External 75mm	External 100mm	External 125mm	External 150mm
ECO RANGE Internal R-Board 50mm	 Eco 50/50mm U=0.25	 Eco+ 50/75mm U=0.21	 Eco 100 50/100mm U=0.18	 Eco 125 50/125mm U=0.16	 Eco 150 50/150mm U=0.14
STANDARD RANGE Internal R-Board 75mm		 Standard 75/75mm U=0.18	 Standard+ 75/100mm U=0.16	 Standard 125 75/125mm U=0.14	 Standard 150 75/150mm U=0.12
SUPREME RANGE Internal R-Board 100mm			 Supreme 100/100mm U=0.14	 Supreme+ 100/125mm U=0.12	 Supreme 150 100/150mm U=0.11
SUPERIOR RANGE Internal R-Board 125mm				 Superior 125/125mm U=0.11	 Superior+ 125/150mm U=0.10
ULTIMATE RANGE Internal R-Board 150mm					 Ultimate 150/150mm U=0.09

GROUND-FLOOR DETAILS

STANDARD SLAB AND DPM/DPC DETAIL

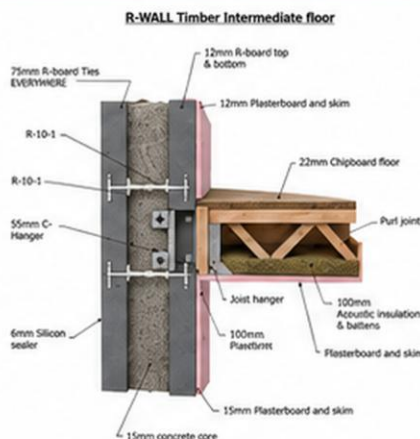


GROUND-FLOOR BLOCK & BEAM DETAIL

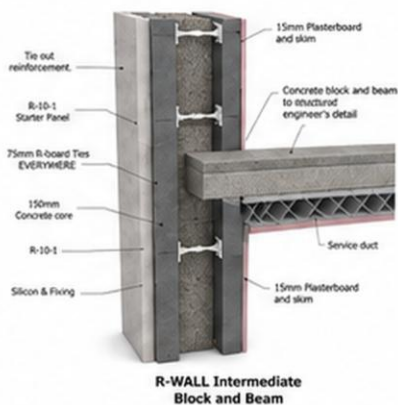


INTERMEDIATE-FLOOR DETAILS

TIMBER INTERMEDIATE-FLOOR DETAIL

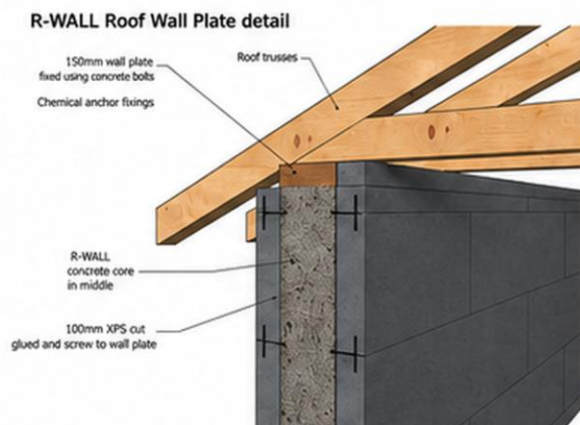


INTERMEDIATE BLOCK & BEAM DETAIL

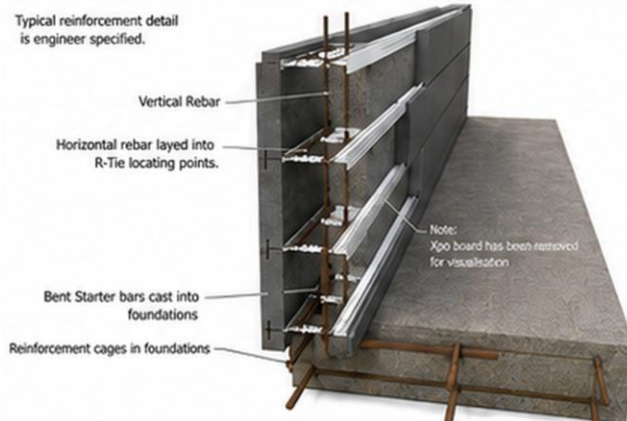


ROOF & RETAINING-WALL DETAILS

ROOF WALL-PLATE DETAIL



RETAINING-WALL REINFORCEMENT DETAIL



A SMALL SAMPLE OF OUR STANDARD DETAILS

These examples are a small selection of R-WALL's most frequently used standard details. The complete library—including DWG and DXF files and market-leading Ψ -values—is available on the R-WALL website or by contacting R-WALL directly.



BUILDING REGULATIONS

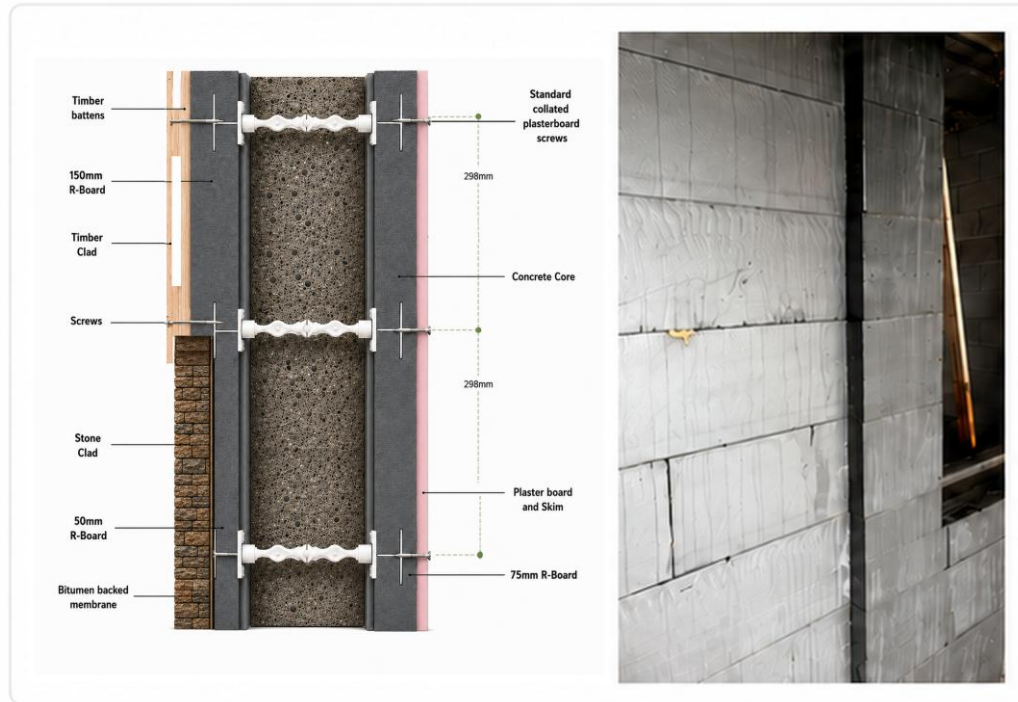
APPROVED

CPD SESSIONS
AVAILABLE

Architects & engineers:
scan to arrange with
R-WALL

R-WALL gives designers control over both R-Board insulation thickness and concrete core thickness anywhere in the build - vertically or horizontally.

1 VARY R-BOARD INSULATION



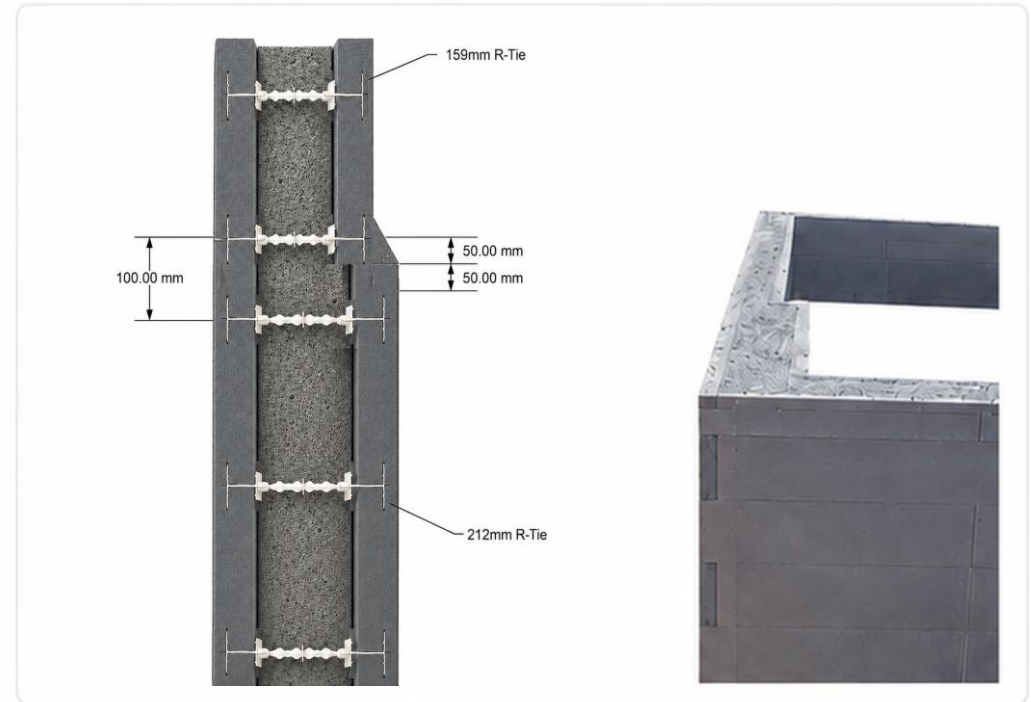
U-Value and energy efficiency control

R-Board can be made thicker or thinner internally and externally to help meet the required U-Value and improve thermal performance.

Flexible cladding build-ups

Insulation thickness can change anywhere in the wall - vertically or horizontally - to accommodate the appearance of flush claddings, for example where a render or timber finish meets a stone clad.

2 VARY CONCRETE CORE THICKNESS



Structural depth only where needed

R-Tie options allow the concrete core depth to step within the same wall, horizontally or vertically, to suit changing structural requirements.

Retaining to non-retaining transitions

A deeper core can be used in retaining zones, then reduced where the wall becomes non-retaining - helping save space and material cost where extra core is not required.

The all-new X-Rail complements R-WALL formwork by creating smooth exposed concrete walls. It accepts standard 18 mm plywood shutter board or recyclable shutter panels that can be stripped and reused, reducing waste and the overall cost of construction.

NEW FOR EXPOSED CONCRETE WALLS

BEFORE POUR > STRIPPED POST-POUR

1 BEFORE POUR



REUSABLE SHUTTER BOARDS

2 AFTER STRIPPING



EXPOSED CONCRETE FINISH

1 EXPOSED FINISH

Forms a clean concrete face without permanent insulation.

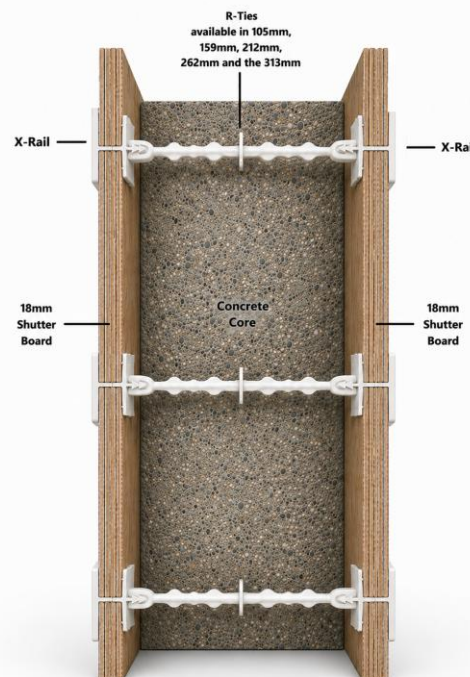
2 REUSE & REDUCE COST

Boards can be stripped and reused, reducing waste and overall construction cost.

3 FLEXIBLE CORE WIDTH

Pairs with the R-Tie range to create different concrete thicknesses.

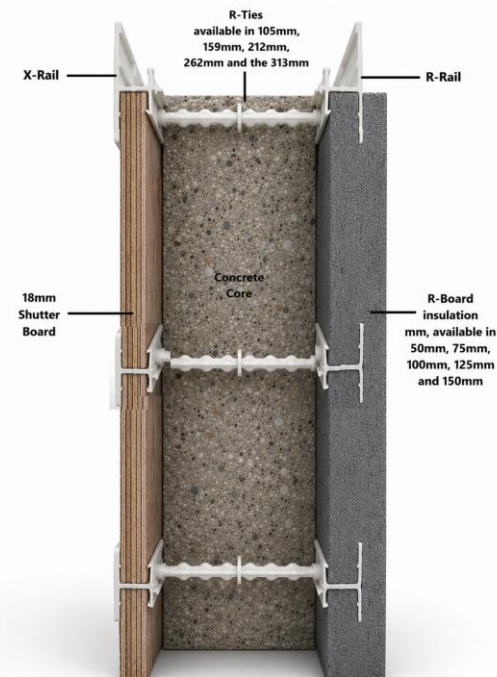
X-RAIL BOTH SIDES



EXPOSED CONCRETE - BOTH FACES

Use X-Rail on both faces for exposed concrete internally and externally. Ideal for retaining walls, substructures and other durable architectural applications.

X-RAIL + R-RAIL



EXPOSED + INSULATED

Combine X-Rail with R-Rail for exposed concrete on one face and closed-cell R-Board insulation on the other - ideal for lift shafts, fireproof walls, swimming pools or simplifying below-ground waterproofing elements.

REUSE SHUTTER BOARDS. REDUCE COSTS.

Strip the boards after the pour and reuse them on subsequent wall sections, reducing material waste and the overall cost of construction.

FIND OUT MORE
www.r-wall.co.uk/x-rail

R-WALL's under-slab system complements the R-WALL formwork by eliminating cold bridging from the ground. A continuous layer of insulation wraps the building and connects seamlessly with the wall system, improving energy efficiency, reducing concrete use and increasing the benefit of thermal mass. Using this system can also reduce the amount of ground excavation required.

CONTINUOUS INSULATION FROM GROUND TO WALL

The system can be used above or below ground. The closed-cell insulation is water resistant and is manufactured using the same environmentally conscious approach as R-Boards. It can be laid as an insulated slab foundation directly over a suitable substrate, without the need for conventional foundations.

AVAILABLE THICKNESSES

50 | 75 | 100 | 125 | 150 mm

0.030 / 0.031
W/m.K

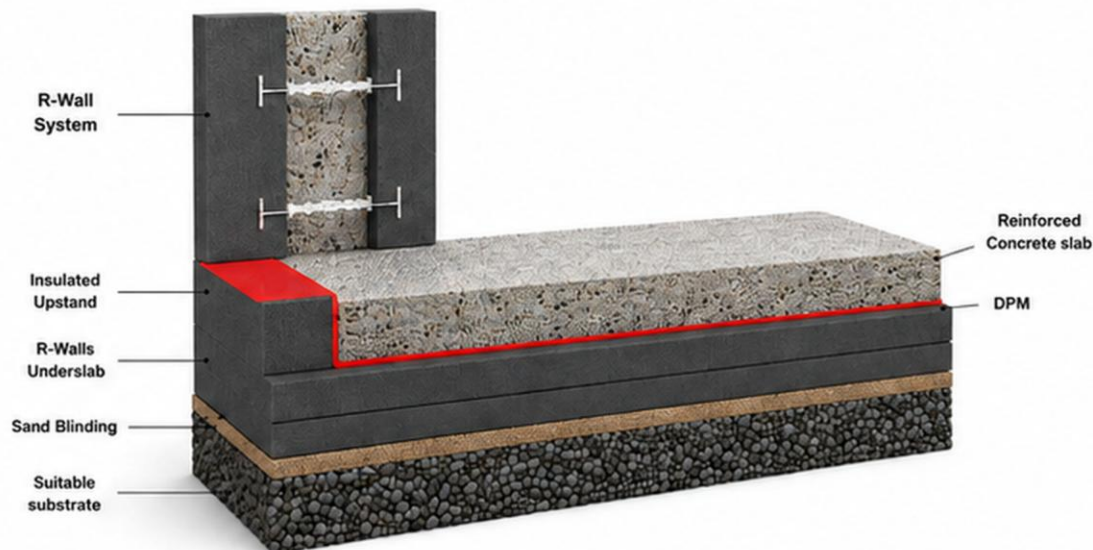
THERMAL CONDUCTIVITY
below / above 120mm

2500 x 600
mm

BOARD SIZE
double-layer cross
lamination

300 / 500 / 700
kPa

COMPRESSIVE STRENGTH
domestic / commercial /
industrial



1

INSULATION LAID ON A SAND BLINDING

Ground is excavated to a suitable substrate, sand blinded then layers of closed cell R-Floor Insulation are laid.



2

UPSTAND'S AND REINFORCEMENT LAID

Upstand installed and reinforcement is laid.



3

REINFORCED SLAB COMPLETE

The reinforced concrete slab is cast over the insulated floor build-up, completing the continuous thermal envelope.

R-WALL's choice of finishes are virtually limitless.



UNLIMITED FINISH OPTIONS

They can include, Wood, Render, Stone, Brick, Steel/Zinc and the list goes on.



RENDER & CLADDING FIXINGS

Render can be applied directly to R-WALL. For other finishes, R-Rails run horizontally at 298 mm centres up the wall, providing regular fixing points for battens and cladding. For heavier loads, fixings can be secured anywhere into the continuous concrete core.



DOORS & WINDOWS ANYWHERE

Any type of doors and windows can be incorporated and due to the strength of the Insulation windows and doors can be located anywhere within the wall cavity not just limited to over the concrete core.



UK METRIC BUILDING MATERIALS

R-WALL is compatible with the UK Metric building materials unlike many other imported ICF systems. This has huge advantages both in cost and speed when applying finishes.



PLASTERBOARD DIRECT TO R-RAILS

Plasterboard is applied directly onto the insulation, fixed to the R-Rails, no need for dot and dabbing, no need for battening off walls, no need for cutting plasterboard!



ELECTRICS MADE QUICK & EASY

Electrics are easily chased into the polystyrene with a multitool or hot knife or simply placed in a service void. R-WALL's insulation does not contain plastic webbing and therefore this process is extremely quick and easy.



BBA approval: gold standard

R-WALL is fully BBA tested and approved. BBA certification represents the gold standard for construction product assessment, combining rigorous independent testing, inspection and approval.

When installed, used and maintained in accordance with BBA Certificate 20/5809, R-WALL can satisfy or contribute to satisfying relevant Building Regulation requirements.

BBA approval supports:



Building regulations

Supports compliance approval routes



Warranty providers

Accepted for warranty assessment



Mortgages

Designed to support lending confidence



Steel reinforcement

Not required as standard. Reinforcement can be installed where specified by the structural engineer and should comply with BS 4449:2005.



NHBC Standards 2020: in the opinion of the BBA, the R-WALL ICF System can satisfy or contribute to satisfying relevant NHBC requirements when installed, used and maintained in accordance with the certificate.

R-Board Data Sheet

Properties	Value			Unit	Standard	EN13164 Designation Code		
Thermal Conductivity Declared	0.030	≤ 120mm	W/m.K	EN 13164	AD			
	0.031	> 120mm	W/m.K					
Compressive stress or compressive strength@ 10% deformation	300		kPa	EN 826	CS(10)Y			
Compressive Creep max after 50 years < 2% deformation under stress σC	130		kPa	EN 1606	CC(2/1.5/50)σ			
Water vapour diffusion resistance factor μ (tabulated value)	150		-	EN 12086	MU			
Long term water absorption by total immersion	< 0.7		%	EN 12087	WL(T)			
Water pick-up by diffusion	2	< 80mm	%	EN 12088	WD(V)			
	1	≥ 80mm						
Water pick up after Freeze Thaw	< 1		%	EN 12091	FTCD			
Dimensional stability under specified temperature (70°C) and humidity conditions (90%rh)	< 5		%	EN 1604	DS(70,90)			
Deformation under specified compressive load (40kPa) and temperature (70°C) conditions	< 5		%	EN 1605	DLT(2)5			
Coefficient of linear thermal expansion (typical value)	0.07		mm/(m.K)	-	-			
Fire Performance	E		Euroclass	EN 13501-1				
Temperature limits	-50/+75		°C	-				
Thickness tolerances	1		Class	EN 823	T			
Dimensions	Width	600	mm	EN 822				
	Length	2500	mm	EN 822				
Edge Profile	Butt Edge							
Surface finish	Skin							
Thermal resistance¹								
Thickness(mm)	30	40	50	60	75	100	125	150
R ₀ m².K/W	1.00	1.30	1.65	2.00	2.50	3.30	4.00	4.80
DESIGNATION CODE: XPS-EN 13164-T1-CS(10)Y300-CC(2/1.5/50)130-DS(70,90)-DLT(2)5-WL(T)0.7-WD(V)1.2,3(1)-FTCD1								

R-Board performance data

The R-Board technical table provides declared properties, test standards and designation data for the insulation used within the R-WALL system.



100% RECYCLABLE

Designed for a circular future.



MINIMAL WASTE – RE-USE OF OFF CUTS

Off cuts are reused wherever possible.



TOTALLY UK BASED & MANUFACTURED

Supporting UK jobs and local communities.



FLAT PACK TRANSPORTATION

More efficient transport means lower emissions.



ZERO WASTE TO LANDFILL

Committed to a zero waste future.



7

EXCEPTIONAL LONGEVITY ALMOST 3 TIMES THAT OF OTHER BUILD METHODS

Built to last for generations, reducing resource use and environmental impact over the long term.



INSULATION NEW SCIENCE – BLOWN USING INDUSTRY WASTE GAS CO₂, FACTORY RUN USING ELECTRIC FROM WIND ENERGY ACHIEVING:



A BREEAM GREEN GUIDE RATING



GLOBAL WARMING POTENTIAL OF LESS THAN 5



O₃ OZONE DEPLETION POTENTIAL OF ZERO

8

LONGTERM INCREASED ENERGY PERFORMANCE

Around 80% of a building's environmental impact can be attributed to the heating and running of the building during its lifetime. Creating high performing, energy efficient homes is critical to carbon reduction.



80%
OF ENVIRONMENTAL IMPACT



REAL FEEDBACK. REAL PROJECTS. PROVEN PERFORMANCE.

From award-winning homes and complex self-builds to efficient multi-home developments.

ARCHITECT TESTIMONIAL



AWARD WINNING

“ ROBUST, ADAPTABLE & HIGH-PERFORMING ”

We have worked with R-WALL for several years and have been fortunate to win awards for projects using the system. Its benefits suit experienced contractors and self-builders alike, and its adaptability is a major advantage. Simplifying airtightness, eliminating cold bridges and providing closed-cell waterproof insulation are key attributes.

”

IAN ARMSTRONG

FOUNDER / DIRECTOR, ARCO2 ARCHITECTURE

DESIGN CONFIDENCE

SELF-BUILDER TESTIMONIAL



CURVED SELF-BUILD

“ COMPLEX CURVES, STRAIGHTFORWARD SUPPORT ”

For our rural Kent self-build, we wanted a super-efficient, lightweight material for an oast house that looked traditional but performed like a modern home. Our builder and carpenter worked with it easily, while Lisa and Matt were extremely helpful with the rounded section. R-WALL is lightweight too, allowing us to build it ourselves without breaking our backs. The only question we ask ourselves is: why aren't all houses built out of R-WALL?

”

SELF-BUILDER

RURAL KENT

HELPFUL ON-SITE SUPPORT

DEVELOPER TESTIMONIAL



DEVELOPER DELIVERY

“ BUILDABILITY, CLEAN SITE & QUALITY HOMES ”

We used R-WALL for the first time on a development of eight homes for a local housing association. Lisa and Matt's support from the beginning was invaluable. Every trade commented on the buildability, how clean the site remained throughout and, now complete, the clear quality of the warm and energy-efficient homes. We hope to use R-WALL again on our next site.

”

NOTTLE CONSTRUCTION

“Quicker than traditional, not weather dependent and you don't need as many skilled men.”

KMD DEVELOPMENTS

EIGHT-HOME DEVELOPMENT

WARM, EFFICIENT HOMES

Cost savings with R-WALL come from faster build speed, reduced labour, improved construction timescales and reduced living costs. These real projects show how the system performs on site and in use.

1 CANCEAVE Cornwall



BUILT IN 8 DAYS
R-WALL superstructure

ONLY 3 BUILDERS
first-time R-WALL team

A luxury 4-bedroom bungalow on the rugged Cornish coast, constructed in January in the middle of a Cornish winter. This was the team's first time using R-WALL, and the 8-day timescale included the 2-day onsite training programme, including pour day. The period covered everything from unloading the first delivery to completing the superstructure, ready for internal and external finishes, roof installation and windows. The walls and gables were poured in one day.

PROJECT DATA

Build / date	Detached 4-bedroom luxury bungalow / January 2021
Footprint	165 sqm (158.71 sqm formwork)
Formwork / concrete	£12,087.36 excl. VAT / 25 cubic metres
Team / time	3 first-time builders / 8 days
Performance	U-value 0.14 (Supreme), airtightness 0.65, EPC A (102)

2 BIRDSONG Devon



-£25 / YEAR
client annual cost to live there

ENERGY POSITIVE
makes more than it uses

A qualified architect's own self-build family home, built to Passivhaus certification and AECB CarbonLite standards. Birdsong was the first home in the UK to receive the AECB CarbonLite plaque. With solar panels, an air source heat pump, MVHR and the R-WALL under-slab floor insulation system, the home produces more energy than it uses. The first year of living there cost -£25, excluding water and internet but including hot water, cooking, working from home, lighting, heating and cooling, charging two EVs and the use of power tools.

PROJECT DATA

Build / date	Passivhaus-standard 3-bed, 2-storey home / October 2023
Footprint	96 sqm (247 sqm formwork)
Formwork / concrete	£25,333.34 excl. VAT / 39.27 cubic metres
Team / time	4 first-time builders / 14 days
Performance	U-value 0.11 (Supreme 150), airtightness 0.24, EPC A (112)

PROVEN AT EVERY SCALE

From bespoke one-off homes to large multi-house developments, R-WALL delivers the same speed, performance and reliability.

R-WALL is proven across projects of every scale — from bespoke, high-performance homes through to large multi-house developments. Fast, all-weather construction helps reduce programme delays, while the system's ability to meet and exceed evolving performance standards makes it a future-ready choice. Combined with exceptional durability and minimal aftercare requirements, these benefits are major reasons why self-builders, architects and developers continue to choose R-WALL.

3

LADYBIRD FARM

St Tudy, Cornwall



0.11 WALL U-VALUE

high-performance envelope

2024 BEST ICF HOME

Build It Awards

Designed by ARCO2, Ladybird Farm is a contemporary sustainable home in St Tudy, North Cornwall. R-WALL was used for the external walls and insulated ground floor, creating a thermal-bridge-free envelope with excellent airtightness and thermal performance. The completed home exceeds minimum Passive House U-value requirements and combines very low operational energy demand with a carefully considered material strategy.

PROJECT DATA

Build / location	Contemporary sustainable home / St Tudy, North Cornwall
Architect	ARCO2 Architecture
Area	286 m ²
Performance	Wall U-value 0.11 W/m ² K / air test 0.94 m ³ .h ⁻¹ .m ⁻² @ 50 Pa
Recognition	Build It Awards 2024 — Best ICF Home

4

LUXON DEVELOPMENTS

Trevemper, Cornwall



157 R-WALL HOMES

Trevemper development

2025-2026 WINNER

International Property Awards

Luxon Developments' Trevemper site in Cornwall is a 157-house residential development using R-WALL's Standard System plus X-Rail. The project demonstrates fast, efficient construction at scale and has been recognised at the International Property Awards, winning Best Residential Development 20+ Units, Cornwall for 2025-2026.

PROJECT DATA

Development	Trevemper, Cornwall — 157 houses
Architect	Lilly Lewarne Architects
Formwork	Standard System plus X-Rail
Recognition	Best Residential Development 20+ Units, Cornwall — 2025-2026
Performance	Achievable U-value 0.18 W/m ² K



BUILD 3x FASTER

Rapid, streamlined construction that reduces time on site.



EASY TO INSTALL

Simple system supported by training and clear installation guidance.



ENERGY EFFICIENT

Advanced closed-cell insulation helps minimise cold bridging and running costs.

BUILT TO LAST | MADE IN THE UK | REDUCES COSTS



BUILD SMARTER. LIVE GREENER.

HIGH-PERFORMANCE INSULATING CONCRETE FORMWORK

R-WALL | AWARD-WINNING UK ICF BUILD SYSTEM

REDUCES COSTS

BUILD 3x FASTER

LOW RUNNING COSTS

READY TO START YOUR PROJECT?

Scan the QR code for a no-obligation quotation, or contact the R-WALL team directly.

info@r-wall.co.uk

01288 377337

www.r-wall.co.uk



**SCAN FOR A
NO-
OBLIGATION
QUOTATION**

Online form